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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,035	08/28/2003	Yuki Iseki	7372/80608	6952

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EXAMINER	
CHOI, LING SIU	
ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/650,035

Applicant(s)

ISEKI ET AL.

Examiner

Ling-Siu Choi

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1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003 and 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office action is in response to the Preliminary Amendment filed on September 30, 2003. Claims 1-4 are now pending, wherein claim 1 is an independent claim.

#### ***Claim Objections***

2. Claims 1-4 are objected to because of the following informalities: (a) claim 1, line 2, "melt flow rate" is suggested to be changed to --melt flow rate (MFR)-- and (b) claim 2, line 4, "sec)" is suggested to be changed to --sec), --.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. **The following is a quotation of the second paragraph of 35 U.S.C. 112:**

**The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

4. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 2; claim 2, line 2, the recitation "from 1 to 100" causes indefiniteness because an unit is missing.

***Claim Rejections - 35 USC § 102/103***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4 are rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dall'occo et al. (US 5,849,653).

The present invention relates to a copolymer of ethylene and  $\alpha$ -olefin (C<sub>4-20</sub>) having

A	melt flow rate (MFR)	1-100
B	melt tension at 190°C (MT)	
C	intrinsic viscosity ([ $\eta$ ])	
D	chain length A	
wherein $2 \times \text{MFR}^{-0.59} < \text{MT} < 20 \times \text{MFR}^{-0.59}$ $1.02 \times \text{MFR}^{-0.094} < [\eta] < 1.50 \times \text{MFR}^{-0.156}$ $3.30 < \log A < -0.0815 \times \log (\text{MFR}) + 4.05$		

(summary of claim 1)

Dall'occo et al. disclose a copolymer of ethylene and butene, obtained in the presence of hydrogen and a catalyst comprising (A) a bridged cyclopentadienyl compound of titanium, zirconium, or hafnium, (B) an organometallic aluminum compound of the formula of  $\text{Al}(\text{CH}_2\text{-CR}^4\text{R}^5\text{R}^6)\text{wR}^7\text{H}_z$ , and (C) water, wherein the cyclopentadienyl compound is rac-ethylene-bis(indenyl)zirconium dichloride (abstract; Example 12). Dall'occo et al. further disclose that poly(ethylene-co-butene) has  $[\eta]$  of 1.29 dl/g (Table 2). However, Dall'occo et al. are silent on the claimed properties. In view of that the catalyst is substantially identical to one used in the present invention to prepare the ethylene copolymer, the resulting ethylene polymer would possess the claimed properties. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. **In re Best**, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980).

8. Claims 1-4 are rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tsutsui et al. (US 5,374,700).

Tsutsui et al. disclose an ethylene copolymer comprising ethylene and  $\alpha$ -olefin having 3 to 20 carbon atoms, the ethylene copolymer having MFR of 0.001-50 g /10 min (claim 1). Tsutsui et al. further disclose that the ethylene copolymer is obtained in the presence of a catalyst comprising (A) a transition metal compound having at least two ligands of cyclopentadienyl skeleton, which is bonded together through a (substituted) alkylene group, and (B) an organoaluminum oxy compound (col. 5, lines 15-60; col. 19, lines 19-68; col. 20, lines 1-48; col. 27, lines 43-52; Table 1). However, Tsutsui et al. are silent on the other specific properties other than MFR. In view of that the catalyst is substantially identical to the one used in the present

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invention to prepare the ethylene copolymer, the resulting ethylene polyme would possess the claimed properties. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. **In re Best**, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980).

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

*L. S. Choi*

**LING-SUI CHOI  
PRIMARY EXAMINER**

March 4, 2005